

Claims

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1       1. A method of inducing tolerance in a recipient  
2       mammal of a first species to a tissue obtained from a mammal  
3       of a second species, which tissue expresses an MHC antigen,  
4       said method comprising

5            inserting DNA encoding an MHC antigen of said second  
6       species into a bone marrow hematopoietic stem cell from  
7       said recipient mammal, and

8            allowing said MHC antigen encoding DNA to be  
9       expressed in the recipient.

1       2. The method of claim 1, wherein said cell is  
2       removed from said recipient mammal prior to said insertion  
3       and returned to said recipient mammal after said insertion.

1       3. The method of claim 1, wherein said recipient is  
2       a human.

1       4. The method of claim 1, wherein said mammal is a  
2       swine.

1       5. The method of claim 4, wherein said swine is a  
2       miniature swine.

1       6. The method of claim 1, wherein said DNA is  
2       obtained from the individual mammal from which said tissue  
3       is obtained.

1       7. The method of claim 1, wherein said DNA is  
2       obtained from an individual mammal which is syngeneic to the  
3       individual mammal from which said tissue is obtained.

1                   8. The method of claim 1, wherein said DNA is  
2 obtained from an individual mammal which is MHC identical to  
3 the individual mammal from which said tissue is obtained.

1                   9. The method of claim 1, wherein said DNA  
2 comprises an MHC class I gene.

1                   10. The method of claim 1, wherein said DNA  
2 comprises an MHC class II gene.

11. The method of claim 1, wherein said DNA is  
inserted into said cell by transduction.

1                   12. The method of claim 11, wherein said DNA is  
2 inserted into said cell by a retrovirus.

1                   13. The method of claim 12, wherein said DNA is  
2 recipient is a human and said retrovirus is a Moloney-based  
3 retrovirus.

1                   14. A method of inducing tolerance in a recipient  
2 mammal to a tissue obtained from a donor mammal of the same  
3 species, which tissue expresses an MHC antigen, said method  
4 comprising

5 inserting DNA encoding an MHC antigen of said donor  
6 into a bone marrow hematopoietic stem cell from said  
7 recipient mammal, and

allowing said MHC antigen encoding DNA to be  
expressed in the recipient.

1                   15. The method of claim 14, wherein said cell is  
2 removed from said recipient prior to said insertion and  
3 returned to said recipient after said insertion.

1                   16. The method of claim 14, wherein said recipient  
2 is a human.

1                   17. The method of claim 14, wherein said DNA  
2 comprises an MHC class I gene.

3 18. The method of claim 14, wherein said DNA  
4 comprises an MHC class II gene.

1                   19. The method of claim 14, wherein said DNA is  
2 inserted into said cell by transduction.

1                   20. The method of claim 19, wherein said DNA is  
2 inserted into said cell by a retrovirus.

1 21. The method of claim 20, wherein said retrovirus  
2 is a Moloney-based retrovirus.

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